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MONTHLY LETTER OF THE BUREAU OF ENTOMOLOGY
UNITED STATES DEPARTMENT OF AGRICULTURE.

Number 57.

January, 1919.

DECIDUOUS-FRUIT INSECT INVESTIGATIONS.

A. L. Quaintance, Entomologist in Charge.

Two members of the force have recently received the degree of Doctor of Philosophy, namely, A. C. Baker, from George Washington University, and A. T. Speare, from Harvard University.

W. D. Whitcomb, who was granted a furlough to enter the military service, was honorably discharged from the Army, and has been reinstated in the Bureau. He will be assigned to duty in connection with apple insect investigations in Washington State.

C. H. Alden, who was engaged in scouting work for the oriental peach moth, and who resigned from the service to enter the Army, has been appointed as scientific assistant, and will be given a field assignment.

R. W. Kelley, engaged in extension work in deciduous-fruit insect control in Indiana, visited the Bureau for a few days, and has now returned to his headquarters at La Fayette, Ind.

E. W. Scott, who was granted a furlough to accept a commission as first lieutenant in the Quartermasters Corps of the Army, has been honorably discharged from the Army. He has been reinstated in the Bureau to resume his duties in connection with the enforcement of the Insecticide Act, with headquarters at Vienna, Va.

SOUTHERN FIELD-CROP INSECT INVESTIGATIONS.

W. Dwight Pierce, Entomologist Acting in Charge.

On account of arsenical poisoning, B. R. Coad, in charge of the cotton-boll weevil laboratory at Tallulah, La., has been advised by his physician to take a furlough of two months.

Max Kisliuk, jr., has been placed on a new project entitled "Investigation of Treatment of Human Excrement to Prevent the Breeding of Flies and other Disease-Carrying Insects," for cooperative work with the Public Health Service with headquarters at Wilmington, N. C.

Messrs. Hutchison, Sasscer, and Back have been designated as a committee in cooperation with a committee from the Bureau of Chemistry to investigate the possible utilization of poisonous gases used in warfare for fumigation against insects.

Doctor G. F. White returned to duty after having served for a short period as Captain in the Medical Corps of the Army. He is assigned to a study of the tobacco cutworm disease.

J. U. Gilmore, of the tobacco-insect investigation, returned to duty on January 1, but for personal reasons found it necessary to retire to private life on January 15.

Edward R. Jones has been appointed for work on the tobacco-insect project. Capt. E. E. Gibson returned to duty in January and will continue his systematic work on the Hemiptera at the National Museum.

LIBRARY.

Mabel Colcord, Librarian.

The new volume of the index to the literature of American economic entomology for the five years from January, 1915, to December, 1919, inclusive, is in process of compilation in the Bureau, under the direction of the librarian. This index will follow closely in plan and makeup that for 1905 to 1914 inclusive. Miss Colcord will be glad to receive suggestions as to material to be included, especially "occasional" material which might escape her notice, such as the pamphlets published by the International Harvester Co. and other commercial firms, and reports of special committees or boards, etc.

New Books.

- Bashamba Das. The Aphididae of Lahore, ed. with notes and an introduction by P. van der Goot. (Memoirs of the Indian Museum, v.6, no. 4., p. 135-274, March, 1918.)
- Coghlan, H.L., and Hindley, J.W. Coconut cultivation and plantation machinery. 128 p., 10 pl. London, 1917. Pests, p. 34-43.
- Dondlinger, P.T. The book of wheat; an economic history and practical manual of the wheat industry. 369 p., illus. New York and London, 1916. Insect enemies of wheat, p. 170-187.
- Gatenby, J.B. Polyembryony in parasitic Hymenoptera: A review. Quart. Jour. Micros. Sci., new ser., no. 250 (v. 63, pt. 2), p. 175-196, pl. 14-15, August, 1918. Bibliography, p. 192-193.
- Gould, H.P. Peach-growing. 426 p., illus. (Rural science series, L.H. Bailey, editor.) New York, 1918. Chapter XI. Insect and disease control, p. 218-294.
- Griffin, O.B. Bee Culture in Maine. 58 p., illus. Augusta, 1918. (Maine Dept. Agr. Bul., v. 17, no. 4.)
- Index Medicus. War supplement. A classified record of literature on military medicine and surgery, 1914-1917. Fielding H. Garrison and Frank J. Stockman, editors. 260 p. Washington, 1918. Trench hygiene, p. 13-16. (Flies, lice, etc.)
- Kawalski, J. Un ennemi du cocotier aux Nouvelles-Hebrides - le Promecotheca opacicollis Gestro. Paris, 1917. (Annales des epiphytes, v. 4, p. 286-327, 2 pl.)
- Pierce, W.D., Hutchison, R.H., and Moscovitz, A. Government report on laundry machinery: Its adaptability to various requirements of disinfection and disinsection. (National Laundry Journal, Chicago, v. 81, no. 1, p. 4-14, January 1, 1919.)
- Ramkrishna Ayyar, T.V. Some notes on the habits and life history of the stem weevil attacking Cambodia cotton (Pempherus affinis Faust). Madras Agr. Dept. Year Book, 1918, p. 1-13.
- U.S. Dept. Agr. Publications available for distribution. Revised to July 1, 1918. Washington, January 9, 1919. This contains a complete list of U.S. Dept. Agr. Bulletins 1-688, with prices.
- Van Duzee, E.P. New species of Hemiptera chiefly from California. (California Acad. Sci. Proc., ser. 4, v. 8, no. 7, p. 271-308, Oct. 18, 1918.)

- Wheeler, W. M. A study of some ant larvae, with a consideration of the origin and meaning of the social habit among insects. Amer. Philos. Soc. Proc., v. 57, no. 4, p. 293-343, illus. 1918. Bibliography, p. 339-343.
- Willoughby, W. G., and Cassidy, Louis. Anti-malaria work in Macedonia among British troops. 68 p., 12 pl. London, 1918.
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STORED-PRODUCT INSECT INVESTIGATIONS.

E. A. Back, Entomologist in Charge.

Richard T. Cotton, a Cornell graduate, formerly entomologist of the Insular Experiment Station of Porto Rico, has been appointed entomological assistant to take up the study of Calandra attacking corn. Mr. Cotton has recently been honorably discharged from the Army at Camp Las Casas, P. R., where he held a commission as second lieutenant, Machine Gun Company, 374th Infantry.

J.C. Furman, a 1918 graduate of Clemson College, has been appointed entomological assistant to act as general office assistant. Mr. Furman has recently been honorably discharged from the Officers' Training School, Camp Gordon, Ga.

The electrical machine invented by F.S. Smith of Philadelphia for the control of insects in packages of cereals is now being installed in the factory of the Hecker Cereal Company, New York City. Tests made by Dr. Back and Mr. Smith during November and December showed a 100 per cent killing of various cereal pests when these were introduced in "commercial numbers". The machine promises to be successful and has awakened great interest among cereal concerns approached by its owners, M.E. Gillett and Son, of Tampa, Fla.

F.B. Milliken is now able to resume work after a serious attack of influenza at Amarillo, Tex.

CEREAL AND FORAGE INSECT INVESTIGATIONS.

W. R. Walton, Entomologist in Charge.

The exceptionally open winter has made it possible to continue the corn borer clean-up operations in Massachusetts throughout the months of December and January. The cornstalks, weeds, and other plants are being mowed, gathered up into piles, and burned in the hope of reducing the intensity of the infestation throughout the area. Twenty-five to thirty men have been employed in this work during the period mentioned. Action has also been taken toward the extension of the interstate quarantine to prevent the interstate shipment of plants other than corn which are known to be infested and which afford possible means of the transportation of the insect. This list includes: Swiss chard, beet tops, spinach, celery, and such ornamental plants as gladiolus, chrysanthemum, dahlia, etc.

Dean A. Ricker, formerly employed at the field laboratory located at West Lafayette, Ind., has resigned for the purpose of entering private business.

FEDERAL HORTICULTURAL BOARD.

C.L. Marlatt, Chairman.

The pink bollworm has appeared at one or two points on the Great Bend of the Rio Grande between Candelaria and Boquillas within an area of about 150 miles and also at Barstow, Tex., in the Pecos Valley. The infestation in the Great Bend was evidently from seed or seed cotton smuggled across the Rio Grande from the Mexican side of the river, the Mexican fields evidently having been planted from seed obtained from the Laguna or other infested point in Mexico. The infestation at Barstow is due apparently to seed cotton sent from the Great Bend to this point for shipping. A large force of Board inspectors is in charge of these two areas of infestation and the same radical cleanup steps are being taken there as have been taken hitherto at the points of infestation in eastern Texas.

The work of clean-up in eastern Texas is now practically completed. It developed no infestation whatever in volunteer cotton or in fields illegally planted in the quarantine areas, nor has any infestation by the pink bollworm been found in the United States this year other than at the new points mentioned in western Texas.

In connection with the scouting and other survey work in Texas the aeroplane is being put to possibly its first practical application in agriculture. A try-out of this method of survey work was made last year along the Trinity River and resulted in the discovery of several outlaw cotton fields in heavy timber which had theretofore escaped detection. This particular work was commenced as the result of the detail of Second Lieutenant Harold Compere, son of the entomological explorer George Compere of California, and since Lieutenant Compere's discharge from the Army is being continued under Second Lieutenant William H. Tillisch. The technical observations are being made by H.S. Hensley and one or two flights were made by Carl Heinrich. The aeroplane does wonderfully well as an aid in pink bollworm work, enabling the easy mapping by means of photographs of the quarantined territory and enormously facilitating the inspection work in forested areas and especially in such long stretches of country as the valley of the Rio Grande and its tributaries.

Mr. Busck has completed his surveys and has returned to Washington. Messrs. Loftin and McKinney have returned to Texas for a few weeks to work with Dr. Hunter, and about the middle of February will resume work at the station at Lerdo in the Laguna. In their absence W.K. Hanson has been in charge of the station.

D.M. Rogers has submitted a report on his trip last fall to Michigan, Wisconsin, and the Pacific Coast for the purpose of examining cranberry bogs which have received shipments of cranberry vines from New England points, to determine whether any gipsy-moth infestations had resulted from such shipments. No evidence of the presence of the gipsy moth in any of these bogs was found. In this connection, Mr. Sasscer is conducting tests, in cooperation with Mr. Burgess, to determine both the resistance of cranberry vines to intensive fumigation and the strength of fumigation necessary to destroy the eggs of the gipsy moth.

The possibility of railway cars, used for hauling vegetables, fruit, and other plant products, being the means of distributing noxious insects has been emphasized by recent reports coming to the Board. The most striking of these is from Mr. Frederick Maskew who reports the finding by an inspector, October 11, 1918, at Los Angeles, Cal., of a number of active Colorado beetles in connection with potatoes from Idaho Falls, Idaho. These potatoes came from a region where the potato beetle is not known to exist, and an investigation discloses the fact that this car had been loaded with potatoes in August in Colorado, delivered the consignment in Oklahoma, and then went as an empty to Kansas City, thence to Granger, Wyo., and ultimately to Idaho Falls, where it was loaded and sent to Los Angeles. The potato beetles, evidently in numbers, remained during this

entire movement. The Bureau force is requested to use such opportunities as it has to make examinations of empty cars for the transportation of such materials and to report findings to the Federal Horticultural Board. Steps are being taken to secure some action on the part of railroad authorities that would lead to the cleaning of all such cars at point of unloading.

The attention of the Board has been drawn to a new and perhaps serious source of risk of entry of undesirable plants and plant products in earth ballast being dumped along the shores of the Hudson River and other localities from vessels entering New York. An inquiry has been started to determine the extent of this risk. That it is considerable is evident from the fact that some study has already been made by Dr. Arthur Hollick, Director of the Museum of the Staten Island Association of Arts and Sciences, on foreign plants introduced through this means. There is a possibility of the introduction through this means of soil-infecting disease or of injurious nematodes as well as hibernating insects.

A hearing on the potato wart based on its occurrence in three counties in eastern Pennsylvania was conducted at the Department on January 28. A notice of hearing for February 24 has also been issued with respect to the common barberry on account of the black stem rust of wheat. Another hearing is contemplated for the 25th of February on account of foreign wheat diseases. Additional territory found infested with the European corn borer and a considerable number of additional food plants which have been found subject to attack by this insect will necessitate an early hearing on an extension of this quarantine.

The Mexican border fumigation houses which have been referred to in an earlier number of this Monthly Letter are now substantially completed and will soon be placed in active operation. A supplemental appropriation of \$100,000 has been asked to cover the cost of chemicals and labor used in the disinfection with hydrocyanic acid gas. These fumigation houses, some of which will take 15 railway freight cars at one time, probably represent the largest fumigation operations ever undertaken. They are established at five different entry points between El Paso and Brownsville.

TROPICAL AND SUBTROPICAL FRUIT INSECT INVESTIGATIONS.

C. L. Marlatt, Entomologist in Charge.

No reports have been made for this section since August.

H. A. Morrison has returned from a successful season of tropical insect survey work and is now writing up his notes and caring for the material collected.

W.N. Mann, who spent considerable time in Cuba, has also returned and is now working up his ant and other collections at the National Museum and at Boston in cooperation with Mr. Wheeler.

H.F. Dietz, who has spent some months studying the insect problems of the Canal Zone, has been in Washington for a month's vacation. The field is a very important one and the necessity of keeping in constant touch with it on account of the possibility of new insects getting foothold at this crossroads of the world and from there reaching the United States is very great. Mr. Dietz is returning to the Canal Zone in a few days to resume his work. In the meantime Mr. James Zetek, the Entomologist of the Canal Zone, with whom Mr. Dietz has been cooperating, has been in charge of the Bureau's interests, aided by a laboratory assistant employed by the Bureau, Mr. Ignacio Molino.

A.C. Mason, formerly an entomological inspector assigned to the Texas-Mexico border, more recently in the service of the Army, has been reappointed in the Bureau of Entomology. He has been spending a few weeks in Washington getting inspection experience in the work of the Federal Horticultural Board and he is now leaving for Miami, Fla., to cooperate with G.F. Moznott at the entomological research station established at that point in connection with the Miami Introduction Gardens of the Bureau of Plant Industry.

